February 6, 2004

Marlene H. Dortch
Secretary,
Federal Communications Commission
445 12th Street SW
Washington, D. C., 20054

RE: WC Docket No. 02-60
FCC 03-288

Dear Secretary Dortch:

The Office of Telemedicine of the University of Virginia Medical Center respectfully submits the following comments to the above captioned proceeding. We are grateful to the Commission for its efforts to expand the Rural Health Care Support Mechanism.

We would also like to file notice of an ex-parte visit by Karen S. Rheuban MD and Eugene Sullivan, MS to Christopher Libertelli, legal advisor to Chairman Powell on January 28, 2004 to discuss our comments as filed below.

Sincerely,

Karen S. Rheuban MD
Professor of Pediatrics
Associate Dean for Continuing Medical Education and External Affairs
Medical Director, Office of Telemedicine
University of Virginia Health System

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D. C. 20554

In the Matter of:

	)
Notice of Proposed Rulemaking (NPRM)	)WC Docket No. 02-60
Regarding the Universal Service Support Mechanism for Rural Healthcare.	)

Comments of the Office of Telemedicine of the University of Virginia Medical Center

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February 6, 2004

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In the Matter of:

Notice of Proposed Rulemaking (NPRM) Regarding the Universal Service Support Mechanism for Rural Healthcare.	) WC Docket No. 02-60)

Comments of the Office of Telemedicine of the University of Virginia Medical Center

The Office of Telemedicine of the University of Virginia Medical Center (UVA) submits the following comments in response to the Commission's Notice of Proposed Rulemaking (NPRM) in the above captioned proceeding.

The Commission seeks comment on modifications to the definition of "rural area" as currently implemented by the Rural Health Care Corporation of the Universal Services Administrative Corporation (USAC) and whether there are definitions for rural areas used by other government agencies or medical organizations that would be appropriate for the rural health care program (the "program").

In the Telecommunications Act of 1996 ("the Act"), Congress did not define rural for purposes of the program. We believe that definitions as currently applied to the rural healthcare support mechanism are in part, obsolete, overly restrictive and will become increasingly so should changes not be implemented.

We propose that the Commission look to other federal statutes, such as those governing the definition of "rural" for the USDA Rural Broadband Program (as amended in

the 2004 Consolidated Appropriations Bill) or other USDA programs such as those governing the Rural Utilities Service Distance Learning and Telemedicine Grant program.[1] These definitions are more closely aligned with the true rural nature of many counties and communities otherwise determined to be a "Metropolitan" or "Micropolitan" statistical area by the Office of Management and Budget (OMB). We also urge the FCC to also consider allowing individual state health planning agencies to designate "necessary" or "essential providers" of healthcare services for purposes of securing access to discounted telecommunications services where consistent with the state rural healthcare plan.

A. Background of respondent

The University of Virginia is a state-supported University; our academic health center includes a quaternary care 540 bed healthcare facility, a medical school, a nursing school and facilities for graduate medical education. We serve as the hub of a 48 site telemedicine network primarily serving citizens in rural regions of the Commonwealth of Virginia. Through this network, we provide clinical consultative services, health professional education and patient education with the goal of enhancing access to quality care not locally available in rural communities. To date we have facilitated more than 5900 clinical encounters between remotely located patients (many of whom reside in rural, medically underserved Appalachian communities) and our specialist physicians, and more than 15,000 teleradiology services. We have broadcast thousands of hours of educational programs.

Much like other telehealth programs, most of the end-user sites in our network have been funded through federal, state and foundation grants. Our network is facilitated by

[1] 7 U.S.C. 950bb(b)(2)

broadband connectivity delivered via a host of technologies, to include ISDN, wireless, DSL and T1 connectivity. We have chosen to procure equipment that is both scaleable and open architecture so as to give us flexibility as to the mode of transport and connectivity within our own and to other networks.

It has been reported that more than seventeen federal agencies fund more than a billion dollars in telehealth related grants and demonstration projects annually.[2] UVA has received funding for its telemedicine network from the USDA Distance Learning and Telemedicine Grant Program, the USDA Community Facilities Program, the Department of Commerce NTIA TOP program, the HRSA Office for the Advancement of Telehealth, the HRSA Rural Medicare Hospital Flexibility Program and the Department of Housing and Community Development. The ability to sustain these programs is dependent upon successful efforts to reduce the statutory and regulatory barriers to full implementation of such technologies applied to healthcare. UVA applauds the Commission's most recent Report and Order (02-60) regarding the Rural Healthcare Support Mechanism designed to increase utilization of the program.[3] However, without a definition of "rural" that is more aligned with the original intent of Congress in crafting this program[4], much of the federal government's multi-billion dollar investment in telehealth projects will ultimately be unsustainable.

B. Definition of Rural

In the Act, Congress did not clearly define "rural" for purposes of the rural health care support mechanism.[5] As was defined by the Universal Service Order, an area is

[2] http://www.federaltelemedicine.com./contents.htm
[3] 47 CFR Part 54
[4] Reply Comments of US Representative Rick Boucher NPRM 02-60
[5] 47 U.S.C. §254(h)(5)(B)

designated as rural if it is either 1) located in a non- metropolitan statistical area (MSA), as defined by the Office of Management and Budget (OMB) or 2) is specifically identified in the Goldsmith Modification to 1990 Census data published by the Office of Rural Health Care Policy (ORHP).[6] ORHP no longer utilizes the definition adopted by the Commission in 1997 and the Goldsmith Modification will no longer be applied to census data. OMB's June, 2003 designation of metro areas (based on the 2000 census) will adversely affect the eligibility of sites previously considered as rural; localities that by all other benchmarks, remain rural in character and are, in most cases, health professional shortage areas.[7] Indeed, using the current FCC rules for eligibility for the rural health care program, since 28% of counties previously classified as rural will now be considered micropolitan statistical areas and 12% of counties formerly classified as rural will be considered metropolitan statistical areas by OMB classification, unless the FCC chooses to adopt a newer definition of "rural", significantly fewer healthcare facilities will be eligible to receive discounts under the program.[8]

In the 2002 Farm Security and Rural Investment Act of 2002 ("Farm Bill"), wherein Congress established the USDA Rural Broadband Grant and Loan Program, the original definitions of rural included OMB MSA criteria.[9] However, with the 2004 Omnibus Appropriations Bill, Congress recently struck down the MSA requirement for eligibility for this program, recognizing that previous definitions of rural have been too narrowly defined for communities which are otherwise rural in character. Eligibility for this program by statute now includes any incorporated city or town of 20,000 persons or less.[1]

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[6] FCC 97-157 XI 2(647)

[7] http://www.census.gov/population/www/estimates/metrodef.html

C. The link between low income, rural, universal service, and the public interest is addressed in the Act.

The link between low income, rural, universal service and the public interest is addressed in the Act. UVA maintains that access to healthcare falls within the context of the public interest. *"Consumers in all regions of the Nation, including low-income consumers and those in rural, insular, and high cost areas, should have access to telecommunications and information services"*[10] *"ADDITIONAL PRINCIPLES- Such other principles as the Joint Board and the Commission determine are necessary and appropriate for the protection of the public interest, convenience, and necessity and are consistent with this Act*."[9]

Many of our nation's low income citizens and a significant percentage of our greater than 40 million uninsured Americans receive care from federally qualified community health centers. The Community Health Center (CHC) Program is a federal grant program funded under Section 330 of the Public Health Service Act to provide primary and preventive health care services in medically-underserved areas throughout the U.S. and its territories.[11] Federal grant programs have equipped many of these sites with telemedicine equipment. In 2001, **10.3 million Americans received care from community health centers including more than 4 million uninsured users and more than 88% of CHC patients report incomes below 200% of federal poverty levels**.[12] Although some CHCs

[8] Slifkin, Randolph, and Ricketts, "The Changing Metropolitan Designation Process and Rural America," Journal Of Rural Health, Vol. 20, No 1, Winter 2004.
[9] 7 U.S.C. 901
[10] 47 U.S.C. §254(B)(1-7)
[11] 42 USC Sec. 254b
[12] http://newsroom.hrsa.gov/speeches/2003speeches/shekar-march2003.htm

are located in urban, metropolitan areas, the majority are located in non-MSA designated rural areas. A smaller number of CHCs are located in communities that, but for their OMB designation would otherwise be considered rural.

The Appalachian Regional Commission (ARC), as defined by the Appalachian Regional Development Act, has developed a four tiered classification of the economic status of its counties, which allows for greater levels of federal support for projects in counties so designated (distressed = 80% federal support, transitional =50% support, competitive = 30% support, attainment = special considerations) [13,14] We note that of the ARC designated "distressed" or "transitional" counties in Virginia, none exceed a population density of 250 persons per square mile. (See Attachment B.)

In accordance with the principles of universal service, UVA believes the FCC now has a unique opportunity to draw upon broader federal definitions of "rural" so as to facilitate access to health care services through advanced technologies for greater numbers of our underserved Americans who reside in rural areas.

D. Examples

#1: Clinch River Health Services,

Scott County, Virginia

Clinch River Health Services is located in Dungannon, Virginia in Scott County, and is a federally qualified community health center equipped with state of the art telemedicine technologies funded by HRSA's Office for the Advancement of Telehealth. The region has been designated a health professional shortage area by the Bureau of Health Professions.

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[13] 40 USC II sec 226
[14] http://www.arc.gov/index.do?nodeId=58

However, because of its proximity to Kingsport, Tennessee, Scott County has been designated as a metropolitan statistical area.

The town of Dungannon has a population of only 311, and is located in a mountainous Appalachian region of Virginia. Dungannon is accessible only by primary and secondary roads. The population of Scott County is only 23,403 citizens resulting in a population density of only 44 persons per square mile. There is no hospital in Scott County. For services beyond what is available through the telemedicine program, the citizens of Dungannon must drive either 26 miles through mountainous terrain to the nearest hospital / emergency room in Kingsport, Tennessee, or an equal distance to the hospital in Abingdon, Virginia.

By the FCC's current rules, this community health center is currently ineligible to receive discounted broadband telecommunications services through the Rural Health Care Support Mechanism and thus bears the burden of high cost T1 services that are nearly triple the discounted costs of connectivity paid by similar facilities in other neighboring counties.

In contrast to the FCC adopted standards, Dungannon is considered “exceptionally rural” by USDA standards. By virtue of its ARC status as a “transitional” county, the county is eligible to receive greater levels of assistance through most other federal and state agencies, although not from the FCC.

#2 Care Connection for Children, Virginia Department of Health,

Washington County, Virginia

The Virginia Department of Health (“VDH”) in Washington County is home to "Care Connection for Children," a statewide initiative that offers specialty care to

handicapped children residing in twelve Appalachian counties. Care is provided on site through clinics staffed by University of Virginia and VDH clinicians, and via a telemedicine program funded by the USDA. Full clinics have been held using the telemedicine connectivity, in addition to individual consultations with UVA specialists. Health department employees have used the link to receive educational programs, including critical training in bioterrorism, emergency preparedness and other similar programs.

Like the facility in Dungannon, this health department site in Washington County is ineligible for telecommunications discounts because of its proximity to the Bristol metropolitan statistical area. Washington County is mountainous, and according to the 2000 census, reports a population 51,331 and a population density of 91 persons per square mile. Washington County has also been designated as a "transitional" county by the ARC. The clinic is located outside the city limits of Bristol, Virginia, a city itself that is classified as "mid-rural" by USDA definitions. The clinic received a grant through the USDA Distance Learning and Telemedicine Grant Program, and yet, is ineligible to receive telecommunications discounts through the FCC program.

#3 Konnarock Medical Clinic

Washington County, Virginia

The Konnarock Medical Clinic is a telemedicine facilitated federally qualified community health center located in an isolated valley surrounded by Virginia's highest peaks. The telemedicine equipment was funded by a grant from the Department of Housing and Community Development. The town of Konnarock is located on the border of three Appalachian counties – Washington, Smyth and Grayson counties. The nearest post office

– and the clinic's mailing address, is in Damascus, Virginia, population 1244, in Washington County.

Like those residing in Dungannon, to access emergency services or hospital care, citizens of Konnarock must drive 26 miles over primary and secondary roads through extremely mountainous terrain to the nearest hospital in Abingdon, Virginia. Initially, the Konnarock clinic was considered ineligible for telecommunications discounts because of its Washington County (Bristol MSA) mailing address. However, much like the clinic in Dungannon, the Konnarock clinic is located in a community deemed "exceptionally rural" by USDA standards and "transitional" by the ARC.

With the knowledge that one room of the clinic is physically located in Smyth County, and with data proving that this clinic pays taxes in Smyth County, UVA petitioned USAC for reconsideration of this clinic as eligible as a Smyth County provider. We are grateful to USAC for approving this petition, however, the efforts required to prove rurality for this community health center were burdensome and might have otherwise discouraged similarly eligible facilities from seeking discounts.

#4 Carilion Giles Memorial Hospital in Pearisburg

Giles County, Virginia

Carilion Giles Memorial Hospital is a not-for-profit federally designated Critical Access Hospital located in Pearisburg, Virginia with a population of 2729 persons. Pearisburg is located in Giles County, another mountainous Appalachian community bordering on West Virginia. It is the only hospital in the county, and the only site in which emergency services may be provided to the citizens of Giles county and neighboring regions of West Virginia. The nearest hospital with specialty care is located in Blacksburg, Virginia,

a 24 mile drive over mountainous terrain. The population of Giles County is only 16,657, and the population density is 47 persons per square mile.

This critical access hospital is equipped with a telemedicine system funded by the USDA Distance Learning and Telemedicine Grant Program, currently receives discounts through the Rural Health Care Support Mechanism based on the OMB designation of Giles County as rural. However, with the 2000 census, Giles County has been newly defined as "urban" because of its proximity to the Blacksburg-Christiansburg-Radford, VA Metropolitan Statistical Area. With that designation, the hospital will no longer be able to afford its broadband connectivity should it become ineligible for universal service fund discounts because the cost of the T1 service will triple.

The population of Giles County rose from 16,366 in 1990 to 16,657 in 2000, an increment of 291 persons, hardly sufficient to be designated as urban in character. The population density, economic and health status indicators of the county have changed little during the decade. Giles County is also classified as "transitional" by the ARC and "exceptionally rural" by the USDA. By every other characteristic, Giles County is as rural, isolated and underserved as it was in 1990, the benchmark by which it was considered eligible for Rural Health Care Support Mechanism discounts.

E. Suggested definitions of "rural":

Below we offer other arguments and precedents to support an expanded definition of the term "rural" in relation to the Rural Healthcare Support Mechanism. A broader definition of rural is imperative so as to align the FCC program with other federal telemedicine programs that benchmark against a less restrictive definition of ruralilty

We propose that the Commission adopt an amalgamation of the definition of rural, to include the following:

1) non-MSA county by OMB definitions, as in the earlier order, or,

2) the expanded definition of rural for the USDA Rural Broadband program as amended by the 2004 Omnibus Appropriations Bill ("any area of the United States that is not contained in an incorporated city or town with a population in excess of 20,000 inhabitants.'"), so long as the population density of that county does not exceed 250 persons per square mile.

3) any otherwise eligible facility identified as a necessary health provider according to the state rural health plan.

Precedents for the Commission to expand the definition of "rural" and UVA's suggestions include the following:

1) **Accept the definition of rural for the USDA Rural Broadband Grant and Loan Program as amended in the 2004 Omnibus Appropriations Bill, qualified for county wide population density.**

In the 2004 Consolidated Appropriations Bill, Congress recently struck down the MSA requirement for this USDA program designed to increase deployment of broadband services in rural areas, recognizing that previous definitions of rural have been too narrowly defined for communities which are otherwise rural in character.

"SEC. 772. Section 601(b)(2) of the Rural Electrification Act of 1936 (7 U.S.C. 950bb(b)(2)) is amended to read as follows:

`(2) ELIGIBLE RURAL COMMUNITY- The term `eligible rural community' means any area of the United States that is not contained in an incorporated city or town with a population in excess of 20,000 inhabitants."

We believe this contemporary amended definition demonstrates the clear intent of Congress to expand the definition of rural for purposes of access to broadband telecommunications services. We strongly urge the FCC to adopt the above definition of rural for the Rural Healthcare Support Mechanism. To prevent distribution of discounts to facilities in communities of <20,000 persons in regions otherwise functionally urban, we propose limiting those discounts to communities in counties with a population density of 250 persons per square mile or less.

We believe that such a qualification is necessary, because, as an example, the city of Falls Church, Virginia, in the Northern Virginia MSA reports a population of 10,377 persons. Arlington County, the county in which Falls Church falls geographically (though an independent city) reports a population density of more than 7000 persons per square mile. Falls Church is not rural in character and based on the above criteria, healthcare facilities in that community should not receive nor need discounts under this program.

By contrast, the city of Bristol, Virginia in the Bristol combined area MSA reports a population of 17,367 citizens. Washington County, Virginia, in which Bristol falls geographically, reports a population density of 90.8 persons per square mile. By virtue of its mountainous Appalachian terrain, Washington County is unquestionably rural in character. Washington County has also been identified as a "transitional" county by the ARC.

2) **Consider other USDA standards for rurality as applied to The Rural Utilities Service Telemedicine and Distance Learning Grant Program (RUS DLT program)** wherein by statute:

> *"(b) … RUS will give priority to rural areas that it believes have the greatest need for distance learning and telemedicine services. RUS believes that generally the need is greatest in areas that are economically challenged, costly to serve, and experiencing outward migration. This program is consistent with the provisions of the Telecommunications Act of 1996 that designate telecommunications service discounts for schools, libraries, and rural health care centers".*

Below are the criteria by which rurality is scored for eligibility for RUS DLT grants; for this program USDA does not benchmark against OMB definitions of metropolitan statistical areas.

> *"This criterion will be used to evaluate the relative rurality of service areas for various projects. Under this system, the end user sites and hubs (as defined in CFR 1703.102) contained within the project service area are identified and given a score according to the population of the area where the end user sites are located.*
>
> *(i) The following definitions are used in the evaluation of rurality:*
>
> > *(A) "exceptionally rural" Area means any area of the United States not included within the boundaries of any incorporated or unincorporated city, village, or borough having a population in excess of 5,000 inhabitants.*
> >
> > *(B) Rural Area means any area of the United States included within the boundaries of any incorporated or unincorporated city, village, or borough having a population over 5,000 and not in excess of 10,000 inhabitants.*

(C) Mid-Rural Area means any area of the United States included within the boundaries of any incorporated or unincorporated city, village, or borough having a population over 10,000 and not in excess of 20,000 inhabitants.

(D) Urban Area means any area of the United States included within the boundaries of any incorporated or unincorporated city, village, or borough having a population in excess of 20,000 "[15]

3) **Accept the definition of the USDA Rural Development Housing and Community Facilities program** (an agency which also funds telemedicine equipment) which reports rural area definitions (based on current census data) as below:

   a) *"Open Country that is not part of or associated with an urban area; or*
   b) *Any town, village, city, or place that is not part of or associated with an urban area, and that is rural in character with a population of less than 10,000; or*
   c) *Is not contained within a Metropolitan Statistical Area (MSA) and has a serious lack of mortgage credit with a population between 10,000 and 20,000.*
   d) *Exceptions for rural area definition prior to October 1, 1990, if an area was classified as rural prior to 10/1/90, even if it is within an MSA, it may be still considered rural as long as the population is between 10,000 - 25,000 and rural in character. This designation is in effect until the year 2010."*[16]

[15] 7USC1703.126(b)(2)(iv)
[16] http://rdinit.usda.gov/regs/handbook/w6chp01.pdf

4) **Include locations identified as rural necessary/essential providers by state rural health planning agencies and all critical access hospitals.**

The Bureau of Health Professions authorizes state health planning and development agencies designated to identify qualified areas as part of their rural health plans for purposes of eligibility for certain federal programs.[17] See Attachment A "Virginia Necessary Provider Criteria". We recommend that any otherwise eligible facility that is identified as a "necessary provider" by the State Health Planning Agency, be considered eligible for rural telecommunications discounts.[18]

The Medicare Law allows establishment of a Medicare Rural Hospital Flexibility Program by any State that has submitted the necessary assurances and complies with the statutory requirements for designation of hospitals as Critical Access Hospitals (CAHs). To be eligible as a CAH, a facility must be a currently participating Medicare hospital, a hospital that ceased operations on or after November 29, 1989, or a health clinic or health center that previously operated as a hospital before being downsized to a health clinic or health center. The facility must be located in a rural area of a State that has established a Medicare rural hospital flexibility program, and must be located more than a 35-mile drive from any other hospital or critical access hospital, or be certified by the State to be a "necessary provider". In mountainous terrain or in areas with only secondary roads available, the mileage criterion is 15 miles. In addition, the facility must make available 24 hour emergency care services, provide not more than 25 beds for acute (hospital-level) inpatient care, and maintain a length of stay, as determined on an annual average basis, of

[17] 42 USC Sec. 254e
[18] 42 USC Sec. 1395i-4

no longer than 96 hours."[19] Although the necessary provider language was amended, effective 2006, in the Medicare Prescription Drug, Improvement, and Modernization Act of 2003, UVA believes that the necessary provider provision remains relevant to this proceeding, because certain characteristics regarding community demographics and access to specialty health care (or lack thereof) are monitored more closely at the state level.

5) If the Commission chooses not to accept recommendations 1-4, consider eligibility for all federally qualified Health Centers located in communities with a population of under 20,000 persons (even if located in an area designated as an MSA) if located in a county with a population density of <250 persons/square mile, or any Critical Access Hospital.

All community health centers are classified as "Health Professional Shortage Areas" regardless of geographic location. However, because the goal of the Rural Health Care Support Mechanism is to reduce urban-rural disparities, if the FCC chooses not to broaden the definition for all eligible providers, we propose that **any federally qualified health center** located in any community with fewer than 20,000 persons or **any critical access hospital** in a similar location be considered as eligible for discounts through the Rural Health Care Support Mechanism.

The Virginia Primary Care Association reports 54 community health center delivery sites in Virginia. Two thirds are located in rural areas currently eligible to receive discounts by current FCC rules. Of those sites currently ineligible because of an "urban" designation, fewer than five additional sites would qualify for USAC discounts with a liberalization of the definition of rural by any of the above criteria**.**

[19] 42 CFR Part 489; http://www.cms.hhs.gov/manuals/10_hospital/ho415.asp#_1_21

F. Conclusion.

We commend the FCC for its November, 2003 Report and Order modifying the rules of the Rural Healthcare support mechanism. We are hopeful that the Commission will consider a more expansive definition of rural and choose to:

a.) include any non MSA county by OMB standards or

b) **benchmark against the definition of rural of the USDA Rural Broadband Grant and Loan program as defined in the 2002 Farm Bill and as amended in the 2004 Omnibus Appropriations Bill so long as the population density of that county does not exceed 250 persons per square mile.**

c.) **allow the appropriate state health planning agencies the opportunity to petition the FCC re identified "necessary providers" that might otherwise fall outside the statutory definitions of rural but for whom universal service support would serve the public interest.**

With the changes outlined above, the vision of the Congress to enhance connectivity in the service of improving access to healthcare and health related education programs in rural America will truly become a reality.

Karen S. Rheuban, MD
Medical Director

Eugene Sullivan, MS
Director

Office of Telemedicine
University of Virginia Health System

Attachment A.

Virginia Necessary Provider Criteria

Based on the analysis of Virginia's rural hospitals, the Advisory Committee for the Rural Flexibility Program established the following criteria for a hospital to be designated as a "necessary provider", and thus, eligible for Critical Access Hospital designation. To be classified as a necessary provider a hospital must be the **sole provider in a county** and meet **two of the following five conditions.**

1. The hospital is located in a nonmetropolitan county that is a federally designated Medically Underserved Area (MUA) or Health Professional Shortage Area (HPSA)
2. The hospital is located in a county where the percentage of poverty exceeds the state percentage as specified in the most recent U.S. census of population.
3. The percentage of the hospital's revenue from Medicare must exceed the state average for Medicare reimbursement.
4. The hospital is located in a county where the percentage of population 65 and older is greater than the state average as specified in the most recent estimate of population and age.
5. The Hospital is located in a county whose most recent three-year unemployment rate average exceeds the same three-year average rate for the state.

Because Virginia's independent cities are treated as counties in the census and share many of the jurisdictional rights of counties, the sole provider criteria needs to be adjusted. Many nonmetropolitan independent cities are very small in size and in geographic extent. All are completely surrounded by a county and in may instances, the hospitals that serve the county are located in the independent city. Consequently, for the necessary provider criteria, independent city hospitals are counted as being associated with the surrounding county. Operationally this means that for independent cities a sole provider hospital is one that is the only hospital in the independent city and its surrounding county.

Attachment B:

POPULATION DENSITY OF VIRGINIA COUNTIES, CITIES, AND APPALACHIAN REGIONAL COMMISSION (ARC) STATUS

(All ARC counties in bold)

Source: U.S. Census Bureau, Census 2000 Summary File 1

Source: Appalachian Regional Commission

	Va County	Population	Land area	Pop density/sq mile	ARC status
1	Accomack	38,305	455.2	84.1	
2	Albemarle	79,236	722.6	109.7	
3	**Alleghany**	**21,504**	**450.8**	**47.7**	**transitional**
4	Amelia	11,400	356.8	32.0	
5	Amherst	31,894	475.2	67.1	
6	Appomattox	13,705	333.7	41.1	
7	Arlington	189,453	25.9	7,323.3	
8	Augusta	65,615	970.4	67.6	
9	**Bath**	**5,048**	**531.9**	**9.5**	**transitional**
10	Bedford	60,371	754.5	80.0	
11	**Bland**	**6,871**	**358.7**	**19.2**	**transitional**
12	**Botetourt**	**30,496**	**542.7**	**56.2**	**competitive**
13	Brunswick	18,419	566.1	32.5	
14	**Buchanan**	**26,978**	**503.9**	**53.5**	**distressed**
15	Buckingham	15,623	580.9	26.9	
16	Campbell	51,078	504.5	101.2	
17	Caroline	22,121	532.5	41.5	
18	**Carroll**	**29,245**	**476.3**	**61.4**	**transitional**
19	Charles City	6,926	182.8	37.9	
20	Charlotte	12,472	475.0	26.3	
21	Chesterfield	259,903	425.8	610.5	
22	Clarke	12,652	176.6	71.6	
23	**Craig**	**5,091**	**330.6**	**15.4**	**transitional**
24	Culpeper	34,262	381.0	89.9	
25	Cumberland	9,017	298.5	30.2	
26	**Dickenson**	**16,395**	**331.7**	**49.4**	**distressed**
27	Dinwiddie	24,533	503.7	48.7	
28	Essex	9,989	257.8	38.8	
29	Fairfax	969,749	395.0	2,454.8	
30	Fauquier	55,139	649.7	84.9	
31	**Floyd**	**13,874**	**381.2**	**36.4**	**transitional**
32	Fluvanna	20,047	287.4	69.8	
33	Franklin	47,286	692.1	68.3	
34	Frederick	59,209	414.6	142.8	
35	**Giles**	**16,657**	**357.3**	**46.6**	**transitional**
36	Gloucester	34,780	216.6	160.6	
37	Goochland	16,863	284.4	59.3	
38	**Grayson**	**17,917**	**442.6**	**40.5**	**transitional**
39	Greene	15,244	156.6	97.4	
40	Greensville	11,560	295.4	39.1	
41	Halifax	37,355	819.3	45.6	
42	Hanover	86,320	472.7	182.6	
43	Henrico	262,300	238.1	1,101.8	
44	Henry	57,930	382.4	151.5	
45	**Highland**	**2,536**	**415.9**	**6.1**	**transitional**
46	Isle of Wight	29,728	315.9	94.1	
47	James City	48,102	142.9	336.6	
48	King and Queen	6,630	316.3	21.0	

49	King George	16,803	180.0	93.4	
50	King William	13,146	275.4	47.7	
51	Lancaster	11,567	133.1	86.9	
52	**Lee**	**23,589**	**437.1**	**54.0**	**distressed**
53	Loudoun	169,599	519.9	326.2	
54	Louisa	25,627	497.1	51.5	
55	Lunenburg	13,146	431.7	30.5	
56	Madison	12,520	321.4	39.0	
57	Mathews	9,207	85.7	107.5	
58	Mecklenburg	32,380	623.9	51.9	
59	Middlesex	9,932	130.3	76.2	
60	**Montgomery**	**83,629**	**388.2**	**215.4**	**transitional**
61	Nelson	14,445	472.4	30.6	
62	New Kent	13,462	209.6	64.2	
63	Northampton	13,093	207.4	63.1	
64	Northumberland	12,259	192.3	63.7	
65	Nottoway	15,725	314.7	50.0	
66	Orange	25,881	341.7	75.7	
67	Page	23,177	311.1	74.5	
68	Patrick	19,407	483.1	40.2	
69	Pittsylvania	61,745	970.8	63.6	
70	Powhatan	22,377	261.3	85.6	
71	Prince Edward	19,720	352.8	55.9	
72	Prince George	33,047	265.6	124.4	
73	Prince William	280,813	337.8	831.3	
74	Pulaski	35,127	320.6	109.6	
75	Rappahannock	6,983	266.6	26.2	
76	Richmond	8,809	191.5	46.0	
77	Roanoke	85,778	250.9	341.9	
78	**Rockbridge**	**20,808**	**599.6**	**34.7**	**transitional**
79	Rockingham	67,725	851.2	79.6	
80	**Russell**	**30,308**	**474.7**	**63.9**	**distressed**
81	**Scott**	**23,403**	**536.6**	**43.6**	**transitional**
82	Shenandoah	35,075	512.2	68.5	
83	**Smyth**	**33,081**	**452.1**	**73.2**	**transitional**
84	Southampton	17,482	599.6	29.2	
85	Spotsylvania	90,395	400.9	225.5	
86	Stafford	92,446	270.4	341.9	
87	Surry	6,829	279.1	24.5	
88	Sussex	12,504	490.7	25.5	
89	**Tazewell**	**44,598**	**519.7**	**85.8**	**transitional**
90	Warren	31,584	213.7	147.8	
91	**Washington**	**51,103**	**562.9**	**90.8**	**transitional**
92	Westmoreland	16,718	229.2	72.9	
93	**Wise**	**40,123**	**404.0**	**99.3**	**distressed**
94	**Wythe**	**27,599**	**463.2**	**59.6**	**transitional**
95	York	56,297	105.7	532.9	
Cities					
96	Alexandria	128,283	15.2	8,452.0	
97	Bedford City	6,299	6.9	914.5	
98	**Bristol**	**17,367**	**12.9**	**1,346.4**	**transitional**
99	**Buena Vista**	**6,349**	**6.8**	**929.5**	**transitional**
100	Charlottesville	45,049	10.3	4,389.7	
101	Chesapeake	199,184	340.7	584.6	
102	Colonial Heights	16,897	7.5	2,260.3	
103	**Covington**	**6,303**	**5.7**	**1,111.3**	**transitional**
104	Danville	48,411	43.1	1,124.2	
105	Emporia	5,665	6.9	821.9	
106	Fairfax City	21,498	6.3	3,406.9	
107	Falls Church	10,377	2.0	5,225.8	
108	Franklin City	8,346	8.4	999.2	

109	Fredericksburg	19,279	10.5	1,833.0	
110	Galax	6,837	8.2	830.9	
111	Hampton	146,437	51.8	2,828.0	
112	Harrisonburg	40,468	17.6	2,304.4	
113	Hopewell	22,354	10.2	2,182.3	
114	Lexington	6,867	2.5	2,753.8	
115	Lynchburg	65,269	49.4	1,321.5	
116	Manassas	35,135	9.9	3,537.0	
117	Manassas Park	10,290	2.5	4,129.0	
118	Martinsville	15,416	11.0	1,407.1	
119	Newport News	180,150	68.3	2,637.9	
120	Norfolk	234,403	53.7	4,362.8	
121	**Norton**	**3,904**	**7.5**	**518.5**	**distressed**
122	Petersburg	33,740	22.9	1,474.6	
123	Poquoson	11,566	15.5	745.4	
124	Portsmouth	100,565	33.2	3,032.7	
125	**Radford**	**15,859**	**9.8**	**1,615.2**	**transitional**
126	Richmond City	197,790	60.1	3,292.6	
127	Roanoke City	94,911	42.9	2,213.2	
128	Salem	24,747	14.6	1,696.4	
129	Staunton	23,853	19.7	1,210.3	
130	Suffolk	63,677	400.0	159.2	
131	Virginia Beach	425,257	248.3	1,712.7	
132	Waynesboro	19,520	15.4	1,270.8	
133	Williamsburg	11,998	8.5	1,404.1	
134	Winchester	23,585	9.3	2,526.7	
	Total Counties	4,880,848	37,956.3	128.6	
	Total Cities	2,201,956	1,640.9	1,341.9	
	Metro areas				
	Blacksburg	**151,272**	**1,075.9**	**140.6**	**transitional**
	Bristol combined	**91,873**	**1,112.3**	**82.6**	**transitional**
	Charlottesville	174,021	1,649.2	105.5	
	Danville	110,156	1,013.8	108.7	
	Harrisonburg	108,193	868.7	124.5	
	Lynchburg	228,616	2,124.1	107.6	
	NoVa	2,116,692	3,036.2	697.2	
	Richmond	1,096,957	5,711.8	192.1	
	Roanoke	288,309	1,873.7	153.9	
	Virginia Beach	1,558,180	2,365.9	658.6	
	Winchester	82,794	424.0	195.3	
	Total metro	6,007,063	21,255.6	282.6	
	Micro areas				
	Martinsville	73,346	393.3	186.5	
	Staunton	108,988	1,005.4	108.4	
	Tazewell	**44,598**	**519.7**	**85.8**	**transitional**
	Total micro	226,932	1,918.5	118.3	
	Nonmetro/micro	848,809	16,423.0	51.7	